

## **Marijuana Use in Supportive Care for Cancer Patients**

Cancer and cancer treatment may cause a variety of problems for cancer patients. Chemotherapy-induced nausea and vomiting and anorexia and cachexia are conditions that affect many individuals with cancer.

### **Nausea and Vomiting**

Some anticancer drugs cause nausea and vomiting because they affect parts of the brain that control vomiting and/or irritate the stomach lining. The severity of these symptoms depends on several factors, including the chemotherapeutic agent(s) used, the dose, the schedule, and the patient's reaction to the drug(s). The management of nausea and vomiting caused by chemotherapy is an important part of care for cancer patients whenever it occurs. Although patients usually receive antiemetics, drugs that help control nausea and vomiting, there is no single best approach to reducing these symptoms in all patients. Doctors must tailor antiemetic therapy to meet each individual's needs, taking into account the type of anticancer drugs being administered; the patient's general condition, age, and related factors; and, of course, the extent to which the antiemetic is helpful.

There has been much interest in the use of marijuana to treat a number of medical problems, including chemotherapy-induced nausea and vomiting in cancer patients. Two forms of marijuana have been used: compounds related to the active chemical constituent of marijuana taken by mouth and marijuana cigarettes. Dronabinol (Marinol), a synthetic form of the active marijuana constituent delta-9-tetrahydrocannabinol (THC), is available by prescription for use as an antiemetic. The U.S. Food and Drug Administration has approved its use for treatment of nausea and vomiting associated with cancer chemotherapy in patients who have not responded to the standard antiemetic drugs.

National Cancer Institute (NCI) scientists feel that other antiemetic drugs or combinations of antiemetic drugs have been shown to be more useful than synthetic THC as "first-line therapy" for nausea and vomiting caused by anticancer drugs. Examples include drugs called serotonin antagonists, including ondansetron (Zofran) and granisetron (Kytril), used alone or combined with dexamethasone (a steroid hormone); metoclopramide (Reglan) combined with diphenhydramine and dexamethasone; high doses of methylprednisolone (a steroid hormone) combined with droperidol (Inapsine); and prochlorperazine (Compazine). Continued research with other agents and combinations of these agents is under way to determine their usefulness in controlling chemotherapy-induced nausea and vomiting. However, NCI scientists believe that synthetic THC may be useful for some cancer patients who have chemotherapy-induced nausea and vomiting that cannot be controlled by other antiemetic agents. The expected side effects of this compound must be weighed against the possible benefits. Dronabinol often causes a "high" (loss of control or sensation of unreality), which is associated with its effectiveness; however, this sensation may be unpleasant for some individuals.

Marijuana cigarettes have been used to treat chemotherapy-induced nausea and vomiting, and research has shown that THC is more quickly absorbed from marijuana smoke than from an oral preparation. However, any antiemetic effects of smoking marijuana may not be consistent because of varying potency, depending on the source of the marijuana cigarette. To address issues surrounding the medical uses of marijuana, the National Institutes of Health convened a meeting in February 1997 to assess what is known about marijuana's therapeutic potential and to identify what future research avenues would be most productive. The group of experts concluded that more and better studies are needed to fully evaluate the potential use of marijuana as supportive care for cancer patients. One area that will be studied in the near future is a smoke-free delivery system of marijuana's active ingredient THC. Other areas to be studied are the risks associated with marijuana use, including the effects on the lungs and immune system, and the dangerous byproducts of smoked marijuana.

### **Anorexia and Cachexia**

Anorexia, the loss of appetite or desire to eat, is the most common symptom in cancer patients that may occur early in the disease or later as the cancer grows and spreads. Cachexia is a wasting condition in which the patient has weakness and a marked and progressive loss of body weight, fat, and muscle. Anorexia and cachexia frequently occur together, but cachexia may occur in patients who are eating an adequate diet but have malabsorption of nutrients. Maintenance of body weight and adequate nutritional status can help patients feel and look better, and maintain or improve their performance status. It may also help them better tolerate cancer therapy.

There are a variety of options for supportive nutritional care of cancer patients including changes in diet and consumption of foods, enteral or parenteral feeding (delivery of nutrients by tube), and the use of drugs. Currently, an NCI-supported study is under way to evaluate the effects of THC and megestrol acetate (a synthetic female hormone) when used alone and in combination for cancer-related anorexia and cachexia. The appetite, weight, and rate of weight change among patients treated with THC will be compared with patients treated with megestrol acetate or with both therapies. In addition, researchers will evaluate the effect of the drugs alone or in combination on nausea and vomiting and assess differences in the quality of life among those patients who are treated with THC. The toxic effects related to the use of the drugs will also be assessed.

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The Institute of Medicine (IOM), part of the National Academy of Sciences, has published a report assessing the scientific knowledge of health effects and possible medical uses of marijuana. The IOM project was funded by the White House Office of National Drug Control Policy. The IOM released their report on March 17, 1999.

Copies of the report, *Marijuana and Medicine: Assessing the Science Base*, are available from The National Academy Press, Lockbox 285, 2101 Constitution Avenue, NW., Washington, DC 20055; (202) 334-3313 or 1-800-624-6242. The full text of the IOM report is also available at <http://www.nap.edu/readingroom/enter2.cgi?0309071550.html> on the Internet.

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### **Sources of National Cancer Institute Information**

#### **Cancer Information Service**

Toll-free: 1-800-4-CANCER (1-800-422-6237)

TTY (for deaf and hard of hearing callers): 1-800-332-8615

#### **NCI Online**

##### ***Internet***

Use <http://www.cancer.gov> to reach NCI's Web site.

***CancerMail Service***

To obtain a contents list, send e-mail to [cancermail@icicc.nci.nih.gov](mailto:cancermail@icicc.nci.nih.gov) with the word "help" in the body of the message.

**CancerFax®** fax on demand service

Dial 301-402-5874 and listen to recorded instructions.

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